Factors associated with spontaneous clearance of chronic hepatitis C virus infection

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FACTORS ASSOCIATED WITH SPONTANEOUS CLEARANCE OF CHRONIC HEPATITIS C VIRUS INFECTION IN A SCOTTISH COHORT: A RETROSPECTIVE CASE CONTROL STUDY

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1. Supplementary laboratory methodology:

Prior to 2007, serum HCV RNA was measured qualitatively with COBAS Amplicore HCV RNA Monitor Kit Version 2.0 (sensitivity 50-60IU/ml) (Roche Diagnostics Systems, Indianapolis, IN, USA). Between 2007 and 2012 testing was performed using an in-house measurement tool with a sensitivity of 50-1000IU/ml [1]. Since 2012 samples have been tested using a commercial assay with a sensitivity of 12 IU/ml (RealTime HCV, Abbott Laboratories, Chicago, IL, USA). HCV RNA was tested on DBS using an in-house method with a sensitivity of 250-1000IU/ml [2].

2. Supplementary Tables

Supplementary Table 1: Univariate association between case-control status and demographic/clinical factors for subjects with ≥ 24 months confirmed viraemia

	Late spontaneous clearance (n=41)	Chronically infected (n=144)	P value
Male sex [n (%)]	15 (37)	95 (66)	**0.001**
Median age at diagnosis [years (IQR)]	27 (25-36)	32 (27-37)	**0.037**
Ethnic group [n (%)]			0.175
White	39 (95)	142 (99)	
Asian	2 (5)	2 (1)	
Risk group [n (%*)]			0.730
Intravenous drug use	35 (90)	119 (92)	
Other	4 (10)	11 (8)	
Unknown	2	14	
HCV genotype [n (%*)]			0.782
1	6 (40)	40 (47)	
2	1 (7)	3 (4)	
3	8 (53)	42 (49)	
Unknown	26	59	
Serum HIV IgG [n(%*)]			0.827
Positive	1 (3)	3 (4)	
Negative	31 (97)	72 (96)	
Not tested	9	69	
Serum HBsAg [n (%*)]			**0.046**
Positive	2 (5)	0 (0)	
Negative	37 (95)	76 (100)	
Not tested	2	68	
Current IDU [n (%*)]			**0.040**
Yes	11 (34)	71 (55)	
No	21 (66)	59 (45)	
Unknown	9	14	
History of alcohol excess/ALD [n (%*)]			0.230
Yes	18 (49)	49 (38)	
No	19 (51)	81 (62)	
Unknown	4	14	
Cirrhosis [n (%*)]			0.306
Yes	11 (33)	24 (24)	
No	22 (67)	75 (76)	
Unknown	8	62	
HCV VL (IU/ml)			**0.001**
Median	1414†	389926†	
Interquartile range	1000 - 156418	55456 - 1666184	

*Percentage related to the actually recorded data; missing data handled by listwise deletion

†Data on HCV VL only available for 14 patients and 109 patients respectively

Supplementary Table 2: Univariate association between case-control status and demographic/clinical factors for subjects with ≥ 3 PCR tests

	Late spontaneous clearance (n=50)	Chronically infected (n=131)	P value
Male sex [n (%)]	19 (38)	89 (68)	**<0.001**
Median age at diagnosis [years (IQR)]	29 (25-36)	34 (28-38)	**0.030**
Ethnic group [n (%)]			0.750
White	48 (96)	127 (97)	
Asian	2 (4)	4 (3)	
Risk group [n (%*)]			0.978
Intravenous drug use	41 (89)	105 (89)	
Other	5 (11)	13 (11)	
Unknown	4	13	
HCV genotype [n (%*)]			0.848
1	7 (41)	34 (49)	
2	1 (6)	3 (4)	
3	9 (53)	33 (47)	
Unknown	33	61	
Serum HIV IgG [n(%*)]			0.614
Positive	2 (5)	2 (3)	
Negative	36 (95)	60 (97)	
Not tested	12	69	
Serum HBsAg [n (%*)]			**0.010**
Positive	5 (10)	0 (0)	
Negative	43 (90)	61 (100)	
Not tested	2	70	
Current IDU [n (%*)]			**0.018**
Yes	15 (38)	68 (59)	
No	25 (62)	47 (41)	
Unknown	10	16	
History of alcohol excess/ALD [n (%*)]			0.431
Yes	21 (47)	45 (40)	
No	24 (53)	68 (60)	
Unknown	5	18	
Cirrhosis [n (%*)]			0.673
Yes	13 (34)	28 (30)	
No	25 (66)	64 (70)	
Unknown	12	39	
Median duration of diagnosis [months (IQR)]	50 (31-81)	63.5 (20-108)	0.482
HCV VL (IU/ml)			**<0.001**
Median	1000†	207164†	
Interquartile range	1000 - 83293	46467 - 1402500	

*Percentage related to the actually recorded data; missing data handled by listwise deletion

†Data on HCV VL only available for 19 patients and 86 patients respectively

References:

[1] Daniel HD, Grant PR, Garson JA, Tedder RS, Chandy GM, Abraham P. Quantitation of hepatitis C virus using an in-house real-time reverse transcriptase polymerase chain reaction in plasma samples. Diagn Microbiol Infect Dis 2008;61:415-420.
[2] Bennett S, Gunson RN, McAllister GE, Hutchinson SJ, Goldberg DJ, Cameron SO, et al. Detection of hepatitis C virus RNA in dried blood spots. J Clin Virol 2012;54:106-109.